

FACULTY OF ENGINEERING
B.E. 3/4 (Mech.) I Semester (Suppl.) Examination, July 2012
MANUFACTURING PROCESSES

Time : 3 Hours]

[Max. Marks : 75

Note : Answer all questions from Part A. Answer any five questions from Part B.

PART – A

25

1. Compare the bottom gate with top gate in terms of its merits and demerits.
2. State and explain Siver's law.
3. What are the advantages of centrifugal casting over sand casting ?
4. What are the causes of shrinkage cavity in a casting ? How do you eliminate it ?
5. How is acetylene stored in the cylinder for oxy-acetylene welding process ?
6. What is the difference between Gas Tungsten Arc welding and Gas metal arc welding ? What are the shielding gases used for TIG welding ?
7. What is the principle of resistance welding ?
8. What is the difference between piercing and 'blanking' ? In which of the above two processes the clearance is provided to punch.
9. What is the difference between cold working and hot working ? List any two advantages of cold working over hot working.
10. State the differences between presses and hammers.

PART – B

50

11. a) Describe the construction and working of jolt squeeze machine. 5
- b) Design a cylindrical riser for a casting section of 100 mm × 50 mm × 25 mm using suitable h/d ratio. 5
12. a) Explain about the investment casting in detail. 5
- b) Explain the injection moulding of plastics with a neat sketch. 5



13. a) What is solid state welding ? State the merits demerits and applications of explosive welding process. 5
b) Explain about the electroslag welding process with a neat sketch. 5
14. a) State a few weldability tests to predict the hot cracking tendency of the weld bead. Explain any one of them. 5
b) Explain the spinning process along with its merits demerits and applications. 5
15. a) State and explain about Von-Mise's yield criteria. 5
b) Explain about hydrostatic extrusion with a neat sketch. 5
16. Explain the following briefly :
a) Pressurized and nonpressurized gating system. 4
b) Hot cracks in casting. 3
c) Ultrasonic testing. 3
17. Explain the following briefly :
a) Treser yield criteria. 3
b) Differences between brazing, soldering and welding. 3
c) Types of flames in gas welding. 4
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